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1 UNITED STATES DEPARTMENT OF AGRICULTURE
Bureau of Agricultural Economics
W.D.

W OUTLOOK FOR FOOD IN 1943

An Evaluation of the Past, Present, and Prospective Food Supplies
by the Bureau of Agricultural Economics

together with

An Estimate of the Nutritive Value of the Probable 1943 Food Supply
by the Bureau of Home Economics

Washington, D. C.
September 1942

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GENERAL SUMMARY

Total food production in the United States in 1942 is the largest on record and the production in 1943, if the weather is favorable, may be about as large, in spite of increasing difficulties that may be encountered in maintaining production. Our soldiers will have first choice and they will be well fed. Large quantities will be taken for the allied nations. Military and lend-lease requirements will take an increasing share out of the total food supply, but the quantities available to civilians per person in 1942 are greater than the pre-war 1935-39 average. Available per capita civilian supply in 1943 may be somewhat less than in 1941 or 1942 but, nevertheless, larger than the pre-war average (table 1).

There will be an abundant supply of cereals and grain products in 1943. The per capita supply of poultry and eggs will be the largest on record. A large per capita civilian supply of sweetpotatoes and dry edible beans is in prospect. The civilian supply per person of dairy products is expected to be smaller than in either 1941 or 1942 but larger than the for 1935-39 average. There will be a smaller per capita supply of meats than in 1941 but larger than in 1942 or the pre-war average. The per capita supply of fish, fats and oils, fruits, and vegetables is expected to be smaller than in the previous 2 years. Sugar consumption will be reduced below the pre-war average by rationing.

The nutritional value of the civilian food supply in prospect for 1943 appears to be about as good as the average for 1935-36. However, the food may contain less fats, carbohydrates and vitamin A than in 1941. In this connection it should be observed that many of the heaviest users of fats and carbohydrates have been shifted from the civilian to the

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Table 1.- Per capita civilian supply of selected foods, United States,
1935-39 average, 1941, estimated 1942-43 and
percentage comparisons - Continued

Commodity	1943 as percentage of						
	1935-39: average:	1941	1942	1943	1935-39: average:	1941	1942
	Pounds	Pounds	Pounds	Pounds	Percent	Percent	Percent
Fruits							
Fresh							
Citrus	50.0	61.4	58.0	60.0	120.0	97.7	103.2
Apples	41.9	40.7	40.0	30.5	72.8	74.9	75.7
Melons	--	29.8	26.8	27.2		91.3	101.1
Other	59.7	62.9	45.4	42.8	71.7	68.0	94.3
Total (excluding melons)	151.4	165.0	143.4	133.3	88.0	80.8	93.0
Total	--	194.8	170.2	160.5	--	82.4	94.1
Canned							
Citrus .....	.6	.78	.83	.78	130.0	100.0	94.0
Other	13.7	19.4	16.0	11.9	86.9	61.3	74.4
Total	14.3	20.2	16.8	12.7	83.5	62.9	75.0
Canned juices	4.4	12.0	7.1	7.7	175.0	64.2	108.5
Dried	6.0	6.5	6.9	5.3	88.3	81.5	76.8
Frozen	--	1.2	1.4	1.8	--	150.0	123.1
Brined	--	.70	.63	.68	--	97.1	107.9
Vegetables							
Fresh							
Leafy, green and yellow:	82.1	78.7	82.2	74.3	90.5	94.4	90.4
Other	120.4	127.8	128.1	124.1	103.1	97.1	95.0
Total	202.5	206.5	210.2	198.4	98.0	96.1	94.4
Canned							
Leafy, green and yellow:	--	12.2	11.4	8.5	--	69.7	74.6
Other	--	20.7	22.4	19.0	--	91.8	84.8
Total	--	32.9	33.8	27.5	--	83.6	81.4
Other							
Potatoes	144.9	139.2	141.6	135.3	93.4	97.2	95.6
Sweetpotatoes	27.5	22.2	23.1	24.5	89.1	110.4	106.1
Beans, dry, edible	9.2	9.8	9.4	9.9	107.6	101.0	105.3
Sugar							
Raw	104.0	112.0	87.0	6/ 74.8	71.9	66.8	86.0
				7/ 88.7	85.3	79.2	102.0
Refined	97.2	104.7	81.3	6/ 69.9	71.9	66.8	86.0
Index of per capita consumption 8/	100	111	110	7/ 82.9	85.3	79.2	102.0

1/ Barley: Amount used for malt and malt products. Barley cereals are negligible and have not been included. 2/ Corn: Corn meal, corn flour, hominy grits (dry-process products); corn starch, sugar, sirup, dextrose, corn oil (wet-process products); breakfast foods; and farm household consumption (mostly meal). 3/ Wheat: White and whole wheat flour, and cereals. 4/ Oats: Oatmeal. 5/ Rye: Rye flour. 6/ Assuming 1/2-pound ration. 7/ Assuming 3/4-pound ration. 8/ Weighted by Bureau of Labor Statistics retail prices, 1935-39, for commodities or groups of commodities (1935-39 = 100).

military class of consumers. The effect of this, however, may be offset by fuller employment and heavier work involved in the war effort.

The reduction in the supply of fats and carbohydrates for civilian consumption could be made up by careful conservation of fats, the consumption of more cereals, and some increase in the production of butterfat. An increase in the supply of butterfat would also contribute to making up the deficiency in vitamin A, but a larger production of leafy, green, and yellow vegetables than is in prospect would be required to make up fully this deficiency.

Although more of the civilian population have sufficient income to purchase an adequate diet, many will continue to be malnourished or undernourished. Malnutrition will continue as usual to be due partly to a poor choice of foods and partly to the fact that incomes will still not be adequate to purchase minimum nutritional requirements. Higher prices will tend to lift some commodities out of the reach of lower-income families. The establishment of price ceilings and rationing may be helpful to some extent in protecting low-income families, but some will still need such relief aids as have been used in the past.

The distinguishing feature of the situation, however, is not the total supply or its nutritive content but rather the unusually large civilian demand for most foods.

Consumers' spendable income in 1942 is estimated to be about 20 percent larger than last year and about 65 percent larger than the average for the period 1935-39. With the reduction of expenditures for durable goods, some of which are no longer available to the civilian consumer, the spendable income for other than durable goods is estimated to be 37 percent

larger than in 1941 and 97 percent larger than the average for the period 1935-39. While a large portion of this income will be used for clothing, other nondurable goods, and savings, the amount left for food products is much larger than in previous years. With this extra money available, the demand on the part of consumers for larger quantities and better quality of food naturally increases. In the absence of wartime controls this demand would be adjusted to the available supply through rising prices which would absorb the increased income of consumers and at the same time greatly increase the cost of the war. However, with price ceilings placed on most foods, the consumer has enough income to buy more than is available.

The discrepancy between the large demand and the available supply, together with transportation and distribution difficulties, has tended to cause local and over-all shortages. This situation is expected to continue for the remainder of 1942 and into 1943. In fact, the 1943 situation is likely to get worse. As price ceilings are placed on additional food commodities, and at the same time spendable income for other than durable goods is increased, the effect will be to put pressure on the prevailing and prospective price ceilings. The pressure will be particularly noticeable on ceilings for meats, dairy products, fish, and possibly fats and oils. The demand for cheese, eggs, poultry, and butter will be accentuated by the fact that they are partial substitutes for meats, fish, and edible fats. The supply of cereals will be large enough to meet all requirements and any pressure on prices will be due to larger demand for grain for feed rather than food.

The expected pressure on price ceilings, the local shortages already existing, and the desirability of increasing the nutritive content of the

food supply, point to the necessity for rationing available supplies of certain commodities and taking steps to increase production of these commodities or their substitutes.

The supply of meats and poultry could be enlarged by increasing production of broilers and turkeys and by a further increase in the fall pig crop. The supply of dairy products could be increased by substantial subsidies. The supply of proteins could also be enlarged by increasing the production of cheese and of dry skim milk for human consumption. Fats and oils supplies could be enlarged by encouraging larger production of peanuts for oil and by an educational campaign stressing the more economical use of cooking fats.

In estimating the 1943 food supply, it has been assumed that action will be taken by the Department to insure proper distribution or allocation of supplies of farm labor, machinery and fertilizer, and that facilities for transportation, especially from farms to shipping points, will be available where and when needed. These problems require immediate attention.

HOW ESTIMATES WERE OBTAINED

With the exception of sugar and fish, the food statistics for the 1935-39 average, 1941, 1942 and 1943 were compiled by the commodity specialists of the Bureau of Agricultural Economics. The statistics on fish were supplied by the Bureau of Fish and Wildlife, Department of Interior; and on sugar, by the Office of Foreign Agricultural Relations, United States Department of Agriculture.

Estimates of lend-lease requirements were obtained from the Agricultural Marketing Administration through the Foods Requirements Committee. Estimates for military requirements for the fiscal years 1943 and 1944 for the Army and Navy and fiscal 1942 for the Navy were obtained through the Foods Requirements Committee from the Office of the Quartermaster General. Estimates of fiscal 1941 food consumption in the Navy were obtained directly from the Navy Department. From these data, together with further information on per capita consumption in the Army and an estimated military strength, estimates for the calendar years 1941, 1942 and 1943 were derived.

In estimating production for each of the commodities the specific factors that were taken into account are as follows:

Beef: Estimates of beef production were based upon the number of cattle on farms, trends in marketings, and the likely effect of price relationships upon production and marketing.

Veal: In estimating production of veal consideration was given to the upward trend in dairy animals being kept for milk and the effect of this upon the production and marketing of veal calves.

Lamb and Mutton: In estimating production of lamb and mutton, the same consideration was given as in estimating production of beef.

Pork: Production of pork for 1943 is pretty well determined by the pig crop for 1942. Consideration was also given to the hog-corn ratio which is at present favorable for continued high level production.

Eggs: As a result of a 10 percent increase in the number of chickens raised in 1942, the number of layers in 1943 was estimated to be 6 to 8 percent larger than in 1942. It was assumed, moreover, that the egg-feed price ratios are likely to be considerably more favorable than average and that the production per hen is not likely to be over that of 1942.

Chickens: It is estimated that in many sections of the country laying houses will be filled to capacity by the end of 1942. Therefore, the number of chickens raised on farms in 1943 for egg-laying purposes may be little different from 1942. As regards broilers, if no Government action is taken, it was assumed that the production would be about 10 percent higher than in 1942.

Turkeys: Turkey production, without action by the Government, was assumed to be about the same as 1942.

Dairy Products: The specific factors considered in estimating milk production in 1943 were the feed-price ratio, total available feed supplies, the labor supply, competition from hogs and beef cattle, and the probable number of cows on farms.

Fats and Oils: Estimates of the quantities of fats and oils available for food in 1943 are based on the allocation order recently issued by the War Production Board. The order was made effective October 1, 1942. The order requires each manufacturer of food products using 6,000 pounds or more of fats and oils quarterly to limit his use of fats to a specified percentage of the average use in the 2 years 1940 and 1941. Thus, the use of fats by margarine manufacturers will be limited to 110 percent of the base period use, and the use of fats by manufacturers of all other edible products, exclusive of butter and lard, will be limited to 90 percent of the base period use. Limitations also will apply to manufacturers of non-food products. The manufacture of food fats for military use is not restricted by the order. An adjustment reserve is provided to take care of

specific hardships that may arise under the allocation program. In this report it is assumed that all the land produced and not required for export will be consumed.

Fruits: On the basis of past experience and production trends, the total production of fruit was first estimated. Then, taking into account the expected tin situation and the prospective requirements for dried fruits the total production was distributed among fresh, canned, frozen, and dried uses.

Vegetables: In estimating the production of vegetables, the total feasible acreage and previous yields per acre together with the expected labor shortages and transportation difficulties were taken into account. On the canned vegetable pack, consideration was also given to the probable tin restrictions in 1943 and trends in production of processing crops.

Wheat, Rye and Rice: In estimating the production of wheat and rye an account was taken of the feasible acreage and a 20-year average yield. In the case of rice, an estimate was made of the feasible production.

Demand and Price Forecasts: The demand for specific food commodities was estimated on the basis of past relationships between consumption, price and income. It was generally assumed that the national income in 1943 would increase about 13 percent over this year. It was also assumed that with few exceptions, no changes in expected price ceilings will be made in 1943. Where ceilings are not in effect, prices were assumed at some expected or reasonable level.

FEASIBLE PRODUCTION COMPARED WITH ASSUMED PRODUCTION

In estimating the production of foods in 1943 the commodity specialists were, with a few exceptions, guided by the "feasible" production contained in the report "Agriculture's Wartime Production Capacity" by the Interbureau Committee, August 1942. The comparison between the "feasible" production given by the Committee and the assumed production in this report is as follows:

Meat: Because of the lag in time of production and time of marketing for most meat animals the estimated meat production for 1943 shown in this report cannot be compared directly with the estimates of "feasible" livestock production given by the Interbureau Committee. The estimates, however, are in line with the trend and level of production recommended by the Committee as feasible. In large measure, pork production in 1943 is already determined by the 1942 pig crop. Beef production in any one year depends more upon the number of animals actually slaughtered that year than upon the year's farm production.

Eggs: "Feasible" egg production in 1943 is given in the report by the Interbureau Committee as 6 percent over 1942 which is the same as assumed in this report.

Chickens: The estimated "feasible" in 1943 is 11 percent over 1942. In this report an increase of only 5 percent was considered. The smaller

Table 2.- Meats: Supply and disposition, calendar years, 1935-39 average, 1941 and estimated 1942-43

Year	Supply			Disposition					
	Imports	Exports	Stocks, first of year	Total supply	Regular exports	Reserve	Stocks, end of year	Domestic disposition	Exports
	Mill. lb.	Mill. lb.	Mill. lb.	Mill. lb.	Mill. lb.	Mill. lb.	Mill. lb.	Mill. lb.	Mill. lb.
(Dressed weight basis)									
Beef									
1935-39	8,924	214	112	7,850	52		99	7,000	
1941	8,101	302	107	8,510	192		135	7,958	
1942	9,100	150	135	9,385	30	30	135	8,700	
1943	9,031	100	131	9,520	25	15	135	8,700	
Veal									
1935-39	1,037			1,037				1,037	
1941	1,025			1,025				1,025	
1942	1,060			1,060				1,060	
1943	1,100			1,100				1,100	
Lamb and mutton									
1935-39	871		5	876	2		5	871	
1941	825		5	830	3		5	825	
1942	855		5	860	3		5	855	
1943	1,005		5	1,010	3		5	1,005	
Pork (including lard)									
1935-39	7,337	48	502	7,887	143		458	7,337	
1941	9,451	12	656	10,119	75	572	469	9,451	
1942	11,150		469	11,619	69	2,560	600	11,150	
1943	12,675		500	13,175	50	3,121	600	12,675	
All meats									
1935-39	18,169	262	619	17,050	197		462	17,050	
1941	19,506	314	768	20,588	270	572	612	19,506	
1942	22,265	150	612	23,027	102	2,590	740	22,265	
1943	24,065	100	740	24,905	75	3,202	740	24,065	

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that the meat supply for civilian consumption is not likely to be reflected in a similar supply of other meats, such as fish, poultry and other products, or will as the possibilities of the production of certain substitutes for meat; will be discussed in a later section.

Poultry Products

Eggs: The civilian supply of eggs for 1943 (table 3) is estimated to be 5,185 million pounds compared with 5,140 million pounds in 1942, 5,158 million pounds in 1941 and an average of 4,843 million pounds for the period 1935-39. On a civilian per capita basis, this amounts to 40.4, 39.5, 39.3 and 37.5 pounds respectively. Thus, on a per capita basis, the civilians in 1943 are expected to have 2.3 percent more eggs than in 1942, 2.8 percent more than in 1941 and 7.7 percent more than the average for the period 1935-39.

Because of the stronger consumer demand in prospect, egg prices in 1943 are likely to be at least 10 to 15 percent higher than prices this year. Egg prices are likely to reach the minimum ceiling level of 110 percent of parity by about August 1943 and with a tighter meat situation, the pressure on egg prices may become great by the end of next year. If egg prices were frozen at the present level, and allowing for seasonal variation, it is estimated that the demand for eggs in 1943 would be 42.7 pounds per capita. This is 2.3 pounds per capita more than is in prospect. To supply this increase would require 292 million pounds or 194 million dozen eggs more than is estimated in this report.

Chickens: The civilian supply of chickens for 1943 (table 3) is estimated to be 2,931 million pounds compared with 2,945 million pounds in 1942, 2,648 million pounds in 1941 and an average of 2,411 million pounds for the period 1935-39. On a civilian per capita basis, this is 23.6, 22.6, 20.2, and 18.7 pounds respectively. Thus, the per capita supply of chickens in 1943 is estimated to be 4.4 percent more than in 1942, 16.8 percent more than in 1941 and 26.2 percent more than the average for the period 1935-39.

Assuming that chicken prices are frozen at about the present level, the demand for chicken in 1943 is estimated to be 27 pounds per capita. This is 3.4 pounds more per capita or 431 million pounds total than is estimated. As will be pointed out later in the report, the production of young chickens could be greatly increased if proper action is taken by the Department.

Turkeys: The civilian supply of turkeys in 1943 (table 3) is estimated to be 470 million pounds or 3.7 pounds per capita. This compares with 478 million pounds or 3.7 pounds per capita in 1942, 477 million pounds or 3.6 pounds per capita in 1941 and an average of 344 million pounds or 2.7 pounds per capita, for the period 1935-39. The per capita civilian supply

1941 and estimated 1942-43

Year	Imports				Exports				Domestic distribution		
	Production	Imports	first of year	Total supply	larger ex-ports	Lend-lease	for hatch-ling	end of year	Military	Civilian	value
1935-39	5,427	53	117	5,152	7			159	117		
1941	5,743	19	115	5,871	7	210	222	2/ 187	93	5,1	
1942	5,621	12	2/ 147	5,836	7	470	285	3/ 300		1,100	
1943	5,312	18	3/ 100	5,330	7	1,400	275	1/ 300		5,100	
Salmon (dressed weight)											
1935-39	2,411	2	110	2,523	2			109		2,411	1
1941	2,722	7	140	2,863	3	1		161	52	2,648	20
1942	2,118		150	2,300	3	32		155	133	2,118	20
1943	2,000	1	165	2,466	3	48		160	264	2,901	41
Salmon (frozen weight)											
1935-39	350	4/	23	373				29		344	2
1941	474	4/	61	535				50	8	477	3
1942	500	4/	50	550		4		50	18	478	3
1943	500	4/	50	550				50	30	470	3

Eight eggs to a pound.

Domestic holdings 112.5; Government holdings (including dried) 75 million pounds.

Domestic holdings 112.5; Government holdings (including dried) 57 million pounds.

Less than 500,000 pounds.

Turkey for 1943 is thus estimated to be about the same as in 1942, 2.8 percent above 1941 and 37.0 percent above the average for the period 1935-39.

Turkey prices in 1943 are likely to rise further and probably will set the highest of the minimum ceiling levels (28.8 cents per pound) at the end of next year. With such prices and consumer incomes in effect, it appears that prospective supplies will be about ample to meet the demand. If turkey prices, however, were to remain at the present level, the demand for turkey would be 4.8 pounds per capita. This is about 1 pound per capita more than is in prospect. As will be pointed out later, the production of turkeys could be increased.

In the case of both chicken and turkeys, the demand will undoubtedly be further increased due to the expected shortages in meats and fish.

Dairy Products

Total Milk. The civilian disappearance of total milk for human consumption in 1943 is estimated to be 107,814 million pounds compared to 106,405 million pounds in 1942, 107,554 million pounds in 1941 and an average of 104,007 million pounds for the period 1935-39. This is equivalent to a per capita civilian consumption of 814.6 pounds in 1943, 842.2 pounds in 1942, 819.6 pounds in 1941 and an average of 806.4 pounds for the period 1935-39. Thus, the estimated civilian per capita supply for 1943 is 3.3 percent less than in 1942, 0.6 percent less than in 1941 but 1.0 percent higher than the average for the period 1935-39.

If prices of dairy products were frozen at present levels, it is estimated that a total production of 128 billion pounds of milk would be required to meet normal civilian, military and lend-lease needs, even though stocks were reduced to normal levels at the end of 1943. Hence, under the latter assumption with respect to prices, a deficit of about 8 billion pounds appears likely with respect to total milk production in 1943. Moreover, in view of the emergencies which may arise, it probably is desirable to maintain stocks at a higher than normal level.

The above considerations take into account only normal relationships between consumer incomes, prices and consumption of dairy products and make no allowance for the shortage of meats and the limited supply of fats and oils which will undoubtedly have an effect on the demand for dairy products.

No difficulty is anticipated in reaching the indicated production (table 4) for any of the individual dairy products except possibly spray-dried whole and skim milk. Military requirements for the latter may be considerably larger than those indicated in table 4 since dried milk may need to be substituted for fresh milk in some cases. Ice cream production in 1943 may be lower than indicated because of the shortage of sugar.

Fats and Oils

The total supply of fats and oils (excluding butter) for civilian consumption (table 5) is estimated to be 4,333 million pounds for 1943.

Table 1. Imports and exports, calendar years, 1938-39 average, 1941 and estimated 1942-43

Year	Imports		Exports		Balance		Trade		Military: Civilian		per cent
	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	
1938-39	100,000	100,000	100,000	100,000	0	0	100,000	100,000	100,000	100,000	100
1941	115,195	115,195	115,195	115,195	0	0	115,195	115,195	115,195	115,195	100
1942	119,661	119,661	119,661	119,661	0	0	119,661	119,661	119,661	119,661	100
1943	125,000	125,000	125,000	125,000	0	0	125,000	125,000	125,000	125,000	100
1944	130,000	130,000	130,000	130,000	0	0	130,000	130,000	130,000	130,000	100
1945	135,000	135,000	135,000	135,000	0	0	135,000	135,000	135,000	135,000	100
1946	140,000	140,000	140,000	140,000	0	0	140,000	140,000	140,000	140,000	100
1947	145,000	145,000	145,000	145,000	0	0	145,000	145,000	145,000	145,000	100
1948	150,000	150,000	150,000	150,000	0	0	150,000	150,000	150,000	150,000	100
1949	155,000	155,000	155,000	155,000	0	0	155,000	155,000	155,000	155,000	100
1950	160,000	160,000	160,000	160,000	0	0	160,000	160,000	160,000	160,000	100
1951	165,000	165,000	165,000	165,000	0	0	165,000	165,000	165,000	165,000	100
1952	170,000	170,000	170,000	170,000	0	0	170,000	170,000	170,000	170,000	100
1953	175,000	175,000	175,000	175,000	0	0	175,000	175,000	175,000	175,000	100
1954	180,000	180,000	180,000	180,000	0	0	180,000	180,000	180,000	180,000	100
1955	185,000	185,000	185,000	185,000	0	0	185,000	185,000	185,000	185,000	100
1956	190,000	190,000	190,000	190,000	0	0	190,000	190,000	190,000	190,000	100
1957	195,000	195,000	195,000	195,000	0	0	195,000	195,000	195,000	195,000	100
1958	200,000	200,000	200,000	200,000	0	0	200,000	200,000	200,000	200,000	100
1959	205,000	205,000	205,000	205,000	0	0	205,000	205,000	205,000	205,000	100
1960	210,000	210,000	210,000	210,000	0	0	210,000	210,000	210,000	210,000	100
1961	215,000	215,000	215,000	215,000	0	0	215,000	215,000	215,000	215,000	100
1962	220,000	220,000	220,000	220,000	0	0	220,000	220,000	220,000	220,000	100
1963	225,000	225,000	225,000	225,000	0	0	225,000	225,000	225,000	225,000	100
1964	230,000	230,000	230,000	230,000	0	0	230,000	230,000	230,000	230,000	100
1965	235,000	235,000	235,000	235,000	0	0	235,000	235,000	235,000	235,000	100
1966	240,000	240,000	240,000	240,000	0	0	240,000	240,000	240,000	240,000	100
1967	245,000	245,000	245,000	245,000	0	0	245,000	245,000	245,000	245,000	100
1968	250,000	250,000	250,000	250,000	0	0	250,000	250,000	250,000	250,000	100
1969	255,000	255,000	255,000	255,000	0	0	255,000	255,000	255,000	255,000	100
1970	260,000	260,000	260,000	260,000	0	0	260,000	260,000	260,000	260,000	100
1971	265,000	265,000	265,000	265,000	0	0	265,000	265,000	265,000	265,000	100
1972	270,000	270,000	270,000	270,000	0	0	270,000	270,000	270,000	270,000	100
1973	275,000	275,000	275,000	275,000	0	0	275,000	275,000	275,000	275,000	100
1974	280,000	280,000	280,000	280,000	0	0	280,000	280,000	280,000	280,000	100
1975	285,000	285,000	285,000	285,000	0	0	285,000	285,000	285,000	285,000	100
1976	290,000	290,000	290,000	290,000	0	0	290,000	290,000	290,000	290,000	100
1977	295,000	295,000	295,000	295,000	0	0	295,000	295,000	295,000	295,000	100
1978	300,000	300,000	300,000	300,000	0	0	300,000	300,000	300,000	300,000	100
1979	305,000	305,000	305,000	305,000	0	0	305,000	305,000	305,000	305,000	100
1980	310,000	310,000	310,000	310,000	0	0	310,000	310,000	310,000	310,000	100
1981	315,000	315,000	315,000	315,000	0	0	315,000	315,000	315,000	315,000	100
1982	320,000	320,000	320,000	320,000	0	0	320,000	320,000	320,000	320,000	100
1983	325,000	325,000	325,000	325,000	0	0	325,000	325,000	325,000	325,000	100
1984	330,000	330,000	330,000	330,000	0	0	330,000	330,000	330,000	330,000	100
1985	335,000	335,000	335,000	335,000	0	0	335,000	335,000	335,000	335,000	100
1986	340,000	340,000	340,000	340,000	0	0	340,000	340,000	340,000	340,000	100
1987	345,000	345,000	345,000	345,000	0	0	345,000	345,000	345,000	345,000	100
1988	350,000	350,000	350,000	350,000	0	0	350,000	350,000	350,000	350,000	100
1989	355,000	355,000	355,000	355,000	0	0	355,000	355,000	355,000	355,000	100
1990	360,000	360,000	360,000	360,000	0	0	360,000	360,000	360,000	360,000	100
1991	365,000	365,000	365,000	365,000	0	0	365,000	365,000	365,000	365,000	100
1992	370,000	370,000	370,000	370,000	0	0	370,000	370,000	370,000	370,000	100
1993	375,000	375,000	375,000	375,000	0	0	375,000	375,000	375,000	375,000	100
1994	380,000	380,000	380,000	380,000	0	0	380,000	380,000	380,000	380,000	100
1995	385,000	385,000	385,000	385,000	0	0	385,000	385,000	385,000	385,000	100
1996	390,000	390,000	390,000	390,000	0	0	390,000	390,000	390,000	390,000	100
1997	395,000	395,000	395,000	395,000	0	0	395,000	395,000	395,000	395,000	100
1998	400,000	400,000	400,000	400,000	0	0	400,000	400,000	400,000	400,000	100
1999	405,000	405,000	405,000	405,000	0	0	405,000	405,000	405,000	405,000	100
2000	410,000	410,000	410,000	410,000	0	0	410,000	410,000	410,000	410,000	100
2001	415,000	415,000	415,000	415,000	0	0	415,000	415,000	415,000	415,000	100
2002	420,000	420,000	420,000	420,000	0	0	420,000	420,000	420,000	420,000	100
2003	425,000	425,000	425,000	425,000	0	0	425,000	425,000	425,000	425,000	100
2004	430,000	430,000	430,000	430,000	0	0	430,000	430,000	430,000	430,000	100
2005	435,000	435,000	435,000	435,000	0	0	435,000	435,000	435,000	435,000	100
2006	440,000	440,000	440,000	440,000	0	0	440,000	440,000	440,000	440,000	100
2007	445,000	445,000	445,000	445,000	0	0	445,000	445,000	445,000	445,000	100
2008	450,000	450,000	450,000	450,000	0	0	450,000	450,000	450,000	450,000	100
2009	455,000	455,000	455,000	455,000	0	0	455,000	455,000	455,000	455,000	100
2010	460,000	460,000	460,000	460,000	0	0	460,000	460,000	460,000	460,000	100
2011	465,000	465,000	465,000	465,000	0	0	465,000	465,000	465,000	465,000	100
2012	470,000	470,000	470,000	470,000	0	0	470,000	470,000	470,000	470,000	100
2013	475,000	475,000	475,000	475,000	0	0	475,000	475,000	475,000	475,000	100
2014	480,000	480,000	480,000	480,000	0	0	480,000	480,000	480,000	480,000	100
2015	485,000	485,000	485,000	485,000	0	0	485,000	485,000	485,000	485,000	100
2016	490,000	490,000	490,000	490,000	0	0	490,000	490,000	490,000	490,000	100
2017	495,000	495,000	495,000	495,000	0	0	495,000	495,000	495,000	495,000	100
2018	500,000	500,000	500,000	500,000	0	0	500,000	500,000	500,000	500,000	100
2019	505,000	505,000	505,000	505,000	0	0	505,000	505,000	505,000	505,000	100
2020	510,000	510,000	510,000	510,000	0	0	510,000	510,000	510,000	510,000	100
2021	515,000	515,000	515,000	515,000	0	0	515,000	515,000	515,000	515,000	100
2022	520,000	520,000	520,000	520,000	0	0	520,000	520,000	520,000	520,000	100
2023	525,000	525,000	525,000	525,000	0	0	525,000	525,000	525,000	525,000	100
2024	530,000	530,000	530,000	530,000	0	0	530,000	530,000	530,000	530,000	100
2025	535,000	535,000	535,000	535,000	0	0	535,000	535,000	535,000	535,000	100
2026	540,000	540,000	540,000	540,000	0	0	540,000	540,000	540,000	540,000	100
2027	545,000	545,000	545,000	545,000	0	0	545,000	545,000	545,000	545,000	100
2028	550,000	550,000	550,000	550,000	0	0	550,000	550,000	550,000	550,000	100
2029	555,000	555,000	555,000	555,000	0	0	555,000	555,000	555,000	555,000	100
2030	560,000	560,000	560,000	560,000	0	0	560,000	560,000	560,000	560,000	100

Table 5 - Stocks and oils: Supply and disposition, calendar years - average 1935-39, 1941, and estimated 1942 and 1943

Year	Total supply	Factory stocks end of year	Disposition				per capita
			Regular exports	Lend-lease exports	Domestic use	Civilian	
	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	lb.
Lard, excluding use in shortening, etc.							
Average 1935-39:	1,715	104	192	---	---	1,419	11.0
1941	2,508	187	186	237	21	1,877	14.3
1942	2,917	117	150	750	22	1,878	14.7
1943	3,047	97	150	1,000	7	1,793	14.1
Compounds and vegetable cooking fats (shortening)							
Average 1935-39:	1,590	49	2	---	---	1,539	11.9
1941	1,475	53	4	---	26	1,392	10.6
1942	1,323	43	5	25	85	1,165	9.0
1943	1,474	43	5	50	301	1,175	9.1
Margarine (fat content)							
Average 1935-39:	308	4	1	---	---	303	2.3
1941	303	4	2	---	---	297	2.3
1942	333	4	2	40	---	287	2.2
1943	391	4	2	50	---	333	2.5
Other food products and uses							
Average 1935-39:	1/	1/	25	---	---	857	6.6
1941	1/	1/	39	---	18	1,105	8.4
1942	1/	1/	140	50	34	1,016	7.8
1943	1/	1/	240	150	89	963	7.4
Total							
Average 1935-39:	1/	1/	220	---	---	4,118	31.8
1941	1/	1/	231	237	65	4,671	35.6
1942	1/	1/	297	865	141	4,346	33.5
1943	1/	1/	397	1,280	277	4,233	33.4

1/ Statistics on stocks not available.

compared with 4,346 million pounds in 1942, 4,671 million pounds in 1941 and an average of 4,118 million pounds for the period 1935-39. On a per capita basis, this is 33.4 pounds for 1943, 33.5 pounds for 1942, 35.6 pounds for 1941 and an average of 31.8 pounds for the period 1935-39. The expected civilian supply for 1943 on a per capita basis is, therefore, estimated to be about the same as in 1942, about 6 percent less than in 1941 and about 5 percent larger than the average for the period 1935-39.

On the basis of normal relationships between disappearance of food fats, the average price of food fats and incomes of industrial workers, civilian demand for food fats (excluding butter) at present ceiling levels is estimated to be 36 to 38 pounds per capita in 1943. Thus, with only about 33 pounds available for this period there will be an estimated shortage of about 3 to 5 pounds per capita in the supply of food fats for civilian consumption. This estimated shortage may be somewhat decreased by conservation of animal fats and a probable reduction in the use of butter, lard and other shortening in baking cakes due to a reduction in the supply of sugar.

Unless there is rationing of food fats at the consumer level, strong pressures will be exerted against the price ceilings on fats now in effect as a result of the limitations of available supplies and the rising level of consumer purchasing power. At the levels of consumption indicated under the War and Civil Control Administration (page 7) and with an indicated income of industrial workers at 260 percent of the 1935-39 average, it is estimated that the wholesale prices of fats and oils would average considerably higher without ceilings than with ceilings in effect. Retail prices of fats also would be higher, though probably not in the same proportion.

Fish

The total supply for civilian consumption of fresh, frozen, and canned fish for 1943 (table 6) is estimated to be 1,320 million pounds compared with 1,341 million pounds in 1942 and 1,768 million pounds in 1941. On a per capita basis this is 10.4 pounds in 1943, 10.6 pounds in 1942 and 13.5 pounds in 1941. (No comparable data are available for the period 1935-39 but it has been estimated by the Bureau of Fisheries and Wildlife that per capita consumption of fish averaged about 13.3 pounds during those years.) It appears, therefore, that unless the situation shows a marked improvement in the near future, the civilian supply in 1943 of fresh, frozen, and canned fish on a per capita basis will be about 2 percent less than in 1942, about 23 percent less than in 1941 and about 22 percent less than the average for the period 1935-39.

The estimated decrease in the supply of fish for 1943 is accounted for by large lend-lease and military requirements and curtailed production due to purchase of ships by the Government and wartime navigation restrictions.

The expected shortage of fish will undoubtedly tend to aggravate the meat situation and will also increase the demand for other protein foods.

The total civilian supply of fresh fruits, canned fruits, and canned juices are expected to be materially smaller in 1943 than in 1942 and 1941 (table 7). The reduction in the civilian supply is accounted for by large increases and military requirements (for canned fruits and juices) and the prospective packs for some individual items.

Since no price ceiling has been placed on fresh fruits, the expected supply will be consumed at higher prices. However, the price of most fruits is not expected to reach 110 percent of parity.

With an expected increase in the price ceiling for canned fruits (about 25 percent higher than the average price for 1941-42) it is estimated that the demand for most canned fruits will probably equal the supply but this would entail depletion of stocks normally carried into the new canning season.

Vegetables

The total 1943 civilian disappearance of fresh vegetables (table 8) on a per capita basis is estimated to be 198.4 pounds compared to 210.2 pounds in 1942 and 206.5 pounds in 1941. The total per capita 1943 civilian disappearance of processed vegetables is estimated to be 27.5 pounds compared to 33.8 pounds in 1942 and 32.9 pounds in 1941. The 1943 civilian per capita disappearance of sweetpotatoes and dry edible beans (table 9) will be larger than in the previous 2 years. The supply of potatoes will be lower than in the recent past.

Since prices of fresh vegetables are not controlled by any ceilings, it is estimated that with the assumed production and the expected increase in national income, prices received by farmers for 17 major fresh vegetables would increase in 1943 from 15 to 20 percent over 1941. If, however, prices are frozen at the 1942 parity level then the total demand for fresh vegetables in 1943 is expected to exceed the supply by about 3 pounds per capita. This is only about 1-1/2 percent of the estimated 1943 civilian per capita disappearance.

The 1943 total supply of sugar for civilian and industrial consumption (table 10) is estimated to be 8,560,000 short tons. Assuming 1/2 pound ration per person per week, would yield a carry-over at the end of 1943 of 3,918,000 short tons which is 9 percent larger than at the end of 1942, 4 percent larger than at the end of 1941 and 45 percent larger than the average carry-over for the period 1935-39. If the ration is increased to 3/4 pound per person, the carry-over at the end of the year would be 4,189,000 short tons. Assuming 1/2 pound ration, the per capita will be 76.8 pounds of sugar compared with 87 pounds in 1942, 112 pounds in 1941 and an average of 104 pounds for the period 1935-39. If the ration is increased to 3/4 pound in 1943, the per capita will be 83.7 pounds. It must

1/ All figures refer to raw basis, except the per capita ration.

Table 9.- Vegetables: Supply and disposition, calendar years, 1935-39 average, 1941 and estimated 1942-43

Year	Supply				Disposition									
	Production	Imports	Stocks	Total supply	Saved for seed on farms	Where shrinkage	Age	Port	Regulation	Shipments	Landed	Stocks and	Disappearance	Domestic
	bu.	bu.	bu.	bu.	bu.	bu.	bu.	bu.	bu.	bu.	bu.	bu.	bu.	bu.
1935-39	370,183	1,014	106,398	477,595	31,852	27,774	1,933	12,000	---	102,528	---	---	---	---
1941	357,783	934	111,593	470,310	26,136	22,209	2,382	1,974	471	104,633	471	104,633	8,181	304,424
1942	378,175	1,000	104,633	483,808	26,200	22,000	1,600	1,500	1,153	105,000	1,153	105,000	19,882	306,473
1943	368,000	900	105,000	473,900	25,300	20,000	1,500	1,500	1,533	100,000	1,533	100,000	34,465	285,602
Potatoes														
1935-39	74,350	---	10,793	85,143	(5,800)	(5,300)	---	---	---	10,613	---	---	---	63,430
1941	63,284	---	9,615	72,899	3,600	5,293	---	---	0	9,283	0	9,283	591	52,042
1942	69,487	---	9,283	78,770	5,700	5,300	---	---	0	11,364	0	11,364	2,782	53,624
1943	70,000	---	11,364	81,364	5,700	5,000	---	---	0	9,500	0	9,500	5,136	55,428
Beans, dry, edible														
1935-39	13,245	249	5,481	18,975	809	---	158	352	---	5,837	---	---	---	11,819
1941	17,354	---	13,500	30,854	2/ 1,060	---	347	---	2,508	13,600	2,508	13,600	526	12,833
1942	19,852	---	13,500	33,352	2/ 1,000	---	320	---	3,180	15,452	3,180	15,452	1,300	17,000
1943	17,000	---	15,452	32,452	2/ 1,000	---	600	---	3,450	13,300	3,450	13,300	1,249	12,953

1/ Bags of 100 pounds each.

2/ Total saved for seed.

Table 10.- Sugar: Supply and disposition, calendar years, 1935-39 average, 1941 and estimated 1942-43

(In terms of raw)

Year	Supply				Disposition						
	Pro- duc- tion	Im- ports	Stocks: first of year	Total Supply	Govt. stock of oil	Regu- lar ex- ports	Lend- lease certs	Stocks: end of year	Domestic disappearance		
	1,000 short tons	1,000 short tons	1,000 short tons	1,000 short tons	1,000 short tons	1,000 short tons	1,000 short tons	1,000 short tons	Mili- tary	Civil- ian 1/	Civilian per capita
1935-39	1,994	4,877	2,620	9,491		92		2,695		6,704	104.0
1941	2,090	5,848	3,339	11,277		70		3,762	95	7,350	112.0
1942	2,461	3,781	3,762	10,004	250	50	250	3,593	208	5,653	87.0
1943	5,275	3,420	3,593	9,288		50	250	3,913	428	2/4,642	2/74.8
								3/3,189		3/5,371	3/88.7

1/ Includes industrial consumption.

2/ Assuming 1/2 pound ration.

3/ Assuming 3/4 pound ration.

be pointed out that the carry-over and per capita estimates are based on the assumption that each person will take his allotted ration.

Wheat, Rye and Rice

The September crop report indicated that production of wheat in 1942 is 3.8 percent above 1941 and 28.7 percent above the average for the period 1935-39. The production of rye is 33.3 percent above 1941 and 30.4 percent above the average for the period 1935-39. The production of rice is 39 percent above 1941 and 45.2 percent above the average for the period 1935-39.

The civilian per capita disappearance of wheat for food in 1943 (table 11) is estimated to be 230.5 pounds compared to 222.2 pounds in 1942, 223.8 pounds in 1941 and an average of 222.4 pounds for the period 1935-39. The carry-over of wheat at the end of 1943 is estimated to be 1,040 million bushels compared to 1,237 million bushels at the end of 1942, 983 million bushels at the end of 1941 and the average carry-over of 517 million bushels in the period 1935-39. This large carry-over is sufficient to take care of any possible increase in lend-lease requirements and civilian demand. The price of wheat is expected to be \$1.12 per bushel compared to \$1.05 in 1942, 92 cents per bushel in 1941 and an average price of 81 cents per bushel in 1935-39.

The civilian per capita disappearance of rye in 1943 is estimated to be 4.0 pounds compared to 3.9 pounds in 1942, 3.8 pounds in 1941 and an average of 3.9 pounds for the period 1935-39. The carry-over of rye at the end of the year is estimated to be 58 million bushels compared to 40 million bushels at the end of 1942, 43 million bushels at the end of 1941 and an average carry-over of 29 million bushels for the period 1935-39. The price per bushel for rye is expected to be 65 cents in 1943 compared with 60 cents in 1942, 48 cents in 1941 and an average price of 51 cents for the period 1935-39.

The estimated civilian per capita disappearance of rice in 1943 is 5.8 pounds, which is the same as the average for 1935-39 and 0.1 pound more than in 1941 and 1942. Stocks of rice at the end of the year are expected to be 43.4 million bushels compared to 42.4 million bushels in 1942, 37.1 million bushels in 1941 and an average of 34.2 million bushels in the period 1935-39. With the price ceiling on rice it is estimated that the price per bushel will be \$1.40 in 1943 compared to \$1.56 in 1942, \$1.09 in 1941 and an average price of 73 cents in the 1935-39 period.

Oats, Barley and Corn

The September crop report indicated that the production of corn in 1942 will be 12.8 percent above 1941 and 29.7 percent above the average for the period 1935-39. The production of barley will be 16.9 percent above 1941 and 77.4 percent above the average for the period 1935-39. The production of oats will be 15.1 percent above 1941 and 31.5 percent above the average for the period 1935-39. It, therefore, appears that feed grains will be just about large enough to take care of lend-lease and the home

Table 11.- Wheat, rye and rice: Supply and disposition, calendar years, 1935-39 average, 1941 and estimated 1942-43

Year	Crop	Supply					Disposition					
		Im- ports	Stocks: first of year	Total: supply year	Regu- lar ex- ports	Ship- ments to United States terri- tories	Lend- lease ex- ports	Stocks: end of year	Domestic disappearance			
									Mil- tary	Ci- vilian	Other: 1/	Ci- vilian per capita
		Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.	Lb.
Wheat												
1935-39:		762	15	482	1,259	51	3	0	517	0	478	210 222.4
1941 :		946	6	719	1,671	19	3	1	988	7	490	163 223.8
1942 :		982	2	988	1,972	17	3	26	1,237	12	488	189 222.2
1943 :		650	2	1,237	1,889	16	3	43	1,040	41	484	262 230.5
Rye												
1935-39:		46	3	27	76	2	0	0	29	0	9	36 3.9
1941 :		45	10	32	87	0	0	0	43	0	9	35 3.8
1942 :		60	3	43	106	0	0	2	60	0	9	35 3.9
1943 :		42	3	60	105	0	0	3	58	0	9	35 4.0
Rice												
1935-39:		49.8	3.5	32.6	85.9	18.7	0	0	34.2	0	26.9	6.1 5.8
1941 :		52.1	0.5	37.6	90.2	15.7	10.1	0.5	33.1	0.4	26.7	3.7 5.7
1942 :		72.3	0.2	33.1	105.6	13.8	11.5	6.5	42.4	0.6	26.5	4.3 5.7
1943 :		71.4	0.2	42.4	114.0	15.0	13.0	9.4	43.4	2.4	26.5	4.3 5.8

1/ Other includes feed, seed and alcohol.

2/ Crop estimated at 54,028,000 bushels in December 1941 adjusted to 52,041,000 bushels on basis of official estimate of stocks on January 1, 1942.

Table 12. Corn, oats and barley. Supply and disposition, calendar years, 1935-39 average, 1941 and estimated 1942-43

Year	Supply					Disposition						
	Production	Imports	Stocks first of year	Total supply	Regular exports	Shipments to U. S. territories	Lend-lease	Stocks end of year	Millitary 1/	Civilian 1/	Other 2/	Domestic disappearance
1935-39	2,325,200	32,398	1,340,381	3,698,069	42,143	672	--	1,573,561	--	131,811	1,950,102	56.0
1941	2,672,541	786	2,031,579	4,704,906	12,624	274	17,942	2,178,084	30	152,233	2,343,669	62.0
1942	3,015,915	530	2,178,084	5,194,529	1,600	400	14,250	2,275,000	197	161,766	2,641,305	64.4
1943	2,736,000	500	2,275,000	5,011,500	3,000	400	16,250	1,903,850	305	162,555	2,927,000	71.8
Oats												
1935-39	1,129,270	2,937	628,450	1,660,666	4,228	377	--	674,916	--	27,836	953,379	6.9
1941	1,176,107	6,022	809,040	1,991,169	--	37	4,198	758,890	548	28,841	1,191,663	1.1
1942	1,153,413	15,000	758,890	2,127,321	--	50	3,500	825,000	1,414	24,506	1,251,777	7.3
1943	1,140,000	50,000	825,000	2,015,000	--	50	4,500	703,490	2,062	22,038	1,215,000	1.1
Barley												
1935-39	24,270	11,252	114,100	32,222	9,723	496	--	198,000	4/	58,306	95,707	21.1
1941	32,709	1,906	198,000	548,615	3,009	615	31	210,000	8/	61,788	333,083	27.4
1942	419,201	10,000	210,000	639,201	1,000	700	953	290,000	4/	65,000	321,540	24.0
1943	373,000	20,000	250,000	643,000	500	300	1,350	229,360	4/	66,000	50,000	29.0

1/ Corn used for corn meal, grits, flour, prepared breakfast cereals, malt liquors, and starch, sugar, and sirup used for food and industrial uses (alcohol, distilled spirits, corn starch, sugar, and sirup used for industrial purposes) and feed and

2/ National estimates negligible

The civilian per capita consumption of corn, barley and oats used in other food products (table 12) is expected to be larger than the consumption in 1941, 1942 or the average consumption in the 1935-36.

NUTRITIVE VALUE OF 1943 FOOD SUPPLY

An estimate of the nutritive value of the probable 1943 food supply was made by the Bureau of Home Economics and is shown in table 13 in comparison with the average for 1935-36. Included also are the average values for 1941 and 1942 obtained from studies

of family food consumption by the Consumer Purchase Study in 1935-36. This table also gives the average per capita values representing the dietary recommendations of the National Research Council in 1941. The latter have been derived by weighting the data for various age-sex-activity groups by their distribution in the population in 1942.

The expected civilian food supply for 1943 appears to be about as good nutritionally as the average in 1935-36 but it furnishes fewer calories, about the same amount of protein, and slightly less fat and carbohydrates than in 1941. It has less vitamin A than in either 1941 or the average for 1935-36 chiefly because of smaller quantities of leafy, green, and yellow vegetables which are important sources of this nutrient. The average quantity of vitamin B is slightly higher for 1943 than for 1936 and about the same as for 1941. As computed from uncooked foods, the supply meets the National Research Council recommendations except for riboflavin. However, the losses in certain nutrients during food preparation and serving have not been taken into account in either of these estimates. These losses for some nutrients and food groups amount to 50 percent or more of the total found in raw food as produced. The National Research Council recommendations, on the other hand, refer to quantities of each nutrient that should be ingested.

The best national diet we can look forward to in 1943 probably will be only borderline in adequacy with respect to several nutrients. Also in considering average figures such as those given in table 13, we should not lose sight of the fact that there is unequal distribution of food among families with different incomes and in different parts of the country. Hence, while averages may seem to meet the recommendations of nutritionists, actually a large proportion of families have diets seriously deficient in one or more nutrients.

GENERAL RECOMMENDATIONS

Turkey and Broiler Production

Although production of commercial broilers and turkeys has increased greatly in recent years, the output could be expanded considerably further

Table 13.- Average quantities of essential nutrients in selected foods, 1943
per capita per day, with comparisons 1/

Year	Food energy	Protein	Fat	Carbohy- drate	Calcium	Phosphorus	Iron	Vitamin A value	Vitamin B12 acid	Thiamine	Riboflavin	Nicotinic acid												
													Calories	Gross	Gross	Gross	Gross	Gross	Gross	Gross	Gross	Gross	Gross	Gross
Expected civilian supply, 1943 3/	3,230	89	140	403	.88	1.5	15	5,800	110	1.8	1.9	16												
Consumption, 1941 3/	3,460	88	144	452	.87	1.5	16	6,600	110	1.9	1.9	17												
Family food consumption, 1946 4/	2,900	83	--	--	.87	1.4	14	7,100	90	1.6	1.9	15												
National Research Council dietary recommendation 5/	2,800	66	--	--	0.9	--	12	4,700	70	1.6	2.3	16												

1/ Nutritive values based on figures for uncooked food except for National Research Council recommendations.
2/ Total includes both visible and invisible fat.

3/ Disappearance data adjusted to retail basis from Bureau of Agricultural Economics, U. S. Department of Agriculture.
4/ Data from Consumer Purchases Study, Bureau of Home Economics, U. S. Department of Agriculture, based on reports of food delivered to the kitchen adjusted for food purchased and eaten away from home. The promotion of feeding habits diets which were below National Research Council recommendations for important nutrients (data on other nutrients not available at present) were as follows: Calcium 50 percent; Vitamin A value, 30 percent; ascorbic acid, 65 percent; thiamine, 60 percent; riboflavin, 60 percent.

5/ Per capita figures based on 1942 population weights.

through appropriate action by the Department of Agriculture. In 1941 these two branches of the poultry industry supplied 900 million pounds of meat, dressed weight basis. This year the output will be somewhat over 950 million pounds. It is very likely that production in 1943 could be increased another 100 million pounds, or more, to about 1.5 billion pounds through reasonable effort by the Department.

The increased output of broilers could be obtained largely through more complete utilization of existing facilities during otherwise slack periods of the year. In the past, broiler production has fluctuated considerably because of sharp changes in prices. A constant rate of broiler output will be approached as the seasonal variation in broiler prices is reduced. The assurance of a reasonable support level would help considerably to stabilize the industry and bring about an immediate increase in production. With a continued tight meat situation, prices probably would be maintained above any such support level. At the present time broilers are excluded from "antitrust" in the announced price support program and in several ways the Department has discouraged expansion in broiler output.

The production of out-of-season chicks in general farming areas could also be encouraged and a considerable quantity of meat obtained.

Turkey production could be increased greatly in western sections of the wheat belt and probably to some extent in other areas of the country. To get a material expansion would require some special effort by the Department this fall to encourage the saving of ample breeding stocks for next year. Any material expansion in turkeys should be encouraged primarily by marketing in early summer, after the usual starting time. This would make for more complete utilization of breeding stock and hatcheries. The strain on packing facilities also would be lessened since the late crop turkeys could be marketed after the peak in slaughter of other poultry. This, of course, would also aid the movement of the total supply into consumption. Some assurance of price support also probably would be necessary to secure the expansion in turkey production. This could be done on a seasonal basis.

On the average about 4 pounds of feed are needed to produce a pound of broiler and 4-1/2 pounds for 1 pound of turkey (liveweight basis). To produce 1 pound of hog, about 4-1/4 pounds of feed are required. A hog produces more calories per unit of feed than a broiler but on the basis of yield of protein the chicken is superior. Taking these two criteria together there is little difference between broilers and turkeys on the one hand and hogs on the other.

Increasing Hog Production

Due to the limited meat packing capacity, it is not feasible to recommend a large increase in the spring pig crop. However, a further increase in the fall pig crop is recommended. The fall pig crop would go to market during the late spring and summer when the meat supplies are seasonally short.

Increasing Production of Dairy Products

Cheese: Cheese is the only dairy product which is a direct substitute for meat as consumers understand it. On the basis of plant capacity alone, cheese production in 1943 could be increased by 75 million pounds above what would be needed to provide for a normal carry-over, military and lend-lease needs, and normal civilian requirements under a price ceiling equal to current prices. The milk required to produce this much cheese would total 150 million pounds, and would allow for an increase in cheese consumption of 16 percent above the assumed consumption in 1941. This increase would be equivalent to 3 percent of the deficit in meats.

Dried Skim Milk for Human Consumption: It is estimated that with present plant capacity, 750 million pounds of dried skim milk could be produced for human consumption. The estimated production in 1943 is 675 million pounds. Hence, an additional 75 million pounds could be produced, all of the roller-process type. This would require 300 million pounds of liquid skim milk and would reduce the supply of liquid skim milk for animal feed by only a negligible margin. (50 million pounds of skim milk is usually fed).

While roller-process skim milk is not suitable for reconstitution for fluid (beverage) use, nevertheless, it can be used with efficiency for soups, puddings, and other cooking purposes. Since consumption of this milk is much below minimum nutritional needs, and since, in addition, calcium and protein are present in skim milk in the same quantity as in whole milk this would be a way of obtaining the above without the necessity of expanding fluid milk production.

Increasing the Supply of Fats and Oils

With the Fats and Oils Allocation Program (page 7) in effect, the other steps that may be taken to increase the fats and oils supply for 1943 are an increase in the production of peanuts for oil; a foreign purchasing program to acquire fats and oils; an intensified salvage program for collecting waste households greases; an education campaign urging housewives to use fats (especially cooking fats) more efficiently.

No increase in soybeans for oil seems at present feasible as the capacity for crushing is not sufficient to take care of any excess production. There is, however, sufficient crushing capacity for the care of a large production in peanuts. The limiting factors in the case of peanuts are labor, farm machinery, and storage facilities.

Increasing the Supply of Fruits

To help offset the expected lower production of all tree-borne fruits, the increase of local facilities for conserving fruits that go to waste is

the orchards or perish easily in distribution is recommended. Apricots, for example, should be dried in larger quantities to save the portions that perish locally. In some areas peaches deserve similar attention. Dried prunes and raisins are good sources of essential nutrients and more might well be included in average diets.

Because certain varieties of black currants are so high in ascorbic acid, as are also strawberries, the possibility of increased production of these fruits by 1944 or 1945 should be investigated. They are needed in various areas most removed from the citrus-growing regions to help safeguard diets in the face of increased difficulties in distribution of citrus fruits, and as a step in the direction of peacetime supply of ascorbic acid from a wider variety of foods.

Increasing the Production of Vegetables

The limiting factors in the production of fresh vegetables are the supply of labor and transportation facilities. In view of the above, production and consumption of certain types of vegetables in preference to others should be encouraged from a nutritional point of view.

Carrots: In view of their comparative ease of transportation and high nutritional value, the production of carrots should be increased. Carrots are among our best sources of vitamin A value from plants and their consumption should be encouraged.

Broccoli: Broccoli production in the West, to afford a fresher, mild-flavored supply at lower cost to eastern markets, might be a desirable step in the direction of replacing some of the less valuable cauliflower with a greener vegetable, higher in iron, vitamin A and perhaps other values.

Other green-colored and yellow vegetables: Green celery of the Utah type is higher in vitamin A value and iron and probably in ascorbic acid than sliced celery and if feasible, its production should be encouraged. Green beans and green peas are widely used and should be available in larger quantities. Yellow pumpkin and yellow squash should be produced and used in large quantities with nutritional advantage to diets.

MEAT SUBSTITUTES

The following can supply in whole or in part some important nutrients which are furnished by meat:

Poultry: Broilers may serve for quick replacement in large urban markets, but in some areas more ducks, turkeys and rabbit may be used to advantage. In general, the edible portion is the equivalent of the lean meats from the larger animals.

Milk: Milk can substitute for meat with respect to proteins and phosphorus, but not to iron and niacin. On the other hand, milk is a better source of calcium and riboflavin than is meat, and both of these nutrients are essential in diets, especially in the diets of low income urban families. Even with past levels of meat consumption, more milk could have been used with improvement in diets. Assuming that the production of milk cannot be increased much for 1943, the conservation of milk now going into animal feed, by drying it for human consumption and educating families to ways of using it in cooking, would make good the above deficiencies because all the minerals, the water soluble vitamins and the proteins are found in the milk protein. The loss of what in cheese manufacture represents a smaller though less extensive waste of high quality proteins, important minerals and vitamins. When solids incorporated into the final cheese product could salvage some of this loss.

Eggs: Eggs are good sources of several nutrients, especially proteins and iron, and eggs can be used easily in diets to substitute for meat proteins.

Cereals: Cereals supply about 30 percent of the protein in the average diet, more at low income levels. Biologically the proteins from cereals are not as efficient as those from animal sources but they afford a good supplement to milk proteins.

Wheat and oatmeal contain more protein than do other grains. The later-milled flours and cereals afford more protein and iron and more of the B-vitamins found in meats than do the highly milled products.

Legumes: Legumes - various beans, peas and nuts including peanut meal - can substitute proteins for part of that from reduction in meat, but there is a low limit to the quantities that can be incorporated into diets acceptable for many families. A market supply of peanut meal should be provided by educational programs on the nutritive value and the culinary uses of the product.

THE ESTIMATED 1943 CIVILIAN FOOD SUPPLY RELATED TO THE PROPOSED INCOME DISTRIBUTION

With incomes steadily rising and with more of the population of low incomes moving on to higher income levels, the pattern of consumption of the estimated 1943 food supplies among the income groups will probably differ greatly from the past. However, to obtain a good estimate of this pattern would require, among other things, a knowledge of the relationship between the price of a given commodity and the consumption of that commodity by individuals of a given income group and also a knowledge of the speed with which individuals and families of low incomes adopt the pattern of consumption of the higher income groups into which they have moved. Information on these points, however, are at present not available.

Assuming that price effects on the pattern of consumption are negligible as compared with major shifts in the income distribution and,

However, assuming adjustments to consumption patterns of higher income groups are made fairly rapidly, rough estimates of the probable consumption of the 1943 civilian food supply within several income groups have been made and are presented in table 14. 1/

It will be noted that, as in the past, the low income groups will get a smaller percentage of the 1943 per capita supply of most foods. 2/ In fact, it appears that the low income groups while getting more of certain foods than in the past, will receive an even smaller share of the United States average per capita than previously. This can be seen by comparing the per capita consumption figures in this table with table 15 which shows a similar pattern of consumption for 1935-36.

A simple computation based on the results of these two tables shows that in 1935-36 families and single individuals with incomes under \$1,500 had a per capita consumption of meats 15 percent less than the average United States per capita. In 1943, however, this group may have 26 percent less. The per capita consumption of dairy products in 1935-36 for this group was 10 percent less than the average per capita while in 1943 it may be 15 percent less. Again in 1935-36 the per capita consumption of leafy,

1/ The consumption pattern was obtained as follows: A rough estimate of the 1943 income distribution was supplied by the Bureau of Home Economics. The estimated income distribution and an estimated per capita income within each group was then applied to the consumption pattern of the 1935-36 Consumer Purchase Study (adjusted to national per capita disappearance for 1935-36) to obtain a new aggregate consumption for each income group and for each of several food categories. The estimated 1943 total civilian supply for each commodity was then distributed among the income groups in the same proportion as these new aggregates for that commodity were distributed. The consumption figures in table 14 are therefore not the average per capita that would be consumed by individuals in a given income group, but rather a per capita which has been adjusted to the available supply. In actual practice this type of adjustment is made through the mechanics of prices. These estimates, of course, will become invalid if rationing of any of these commodities is instituted.

2/ Potatoes and grain products which are consumed in large quantities by the low income groups are not given in this table because time did not permit converting the estimated 1943 grain supplies into products such as bread, white flour, etc., to make them comparable with the Consumer Purchase Study.

Table 14.- Estimated 1943 per capita consumption of major food categories by income level 1/

Food category	Average for total population	Per capita consumption, families and single individuals with incomes of						
		Under \$200	\$200-499	\$500-999	\$1,000-1,499	\$1,500-2,499	\$2,500-4,999	\$5,000 and over
	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.
Meats								
Beef	48.3	19.9	31.6	40.5	46.8	50.6	55.7	63.1
Veal	6.6	2.6	3.1	4.7	5.8	7.1	8.4	10.1
Lamb and mutton :	7.1	.6	1.5	2.8	4.5	6.5	9.8	19.1
Bacon and salt side	18.6	25.4	18.6	17.1	17.0	17.1	19.1	21.1
Other pork	34.5	16.6	23.6	31.8	33.5	36.8	39.8	42.1
Poultry	20.6	8.5	10.7	12.6	14.2	18.0	25.9	48.1
Other meat	12.8	7.2	12.8	14.9	15.1	14.3	11.4	9.1
Sea Food	10.4	8.5	8.5	8.9	9.6	10.0	11.4	14.1
Eggs	39.4	23.1	31.7	36.8	41.1	41.1	42.6	46.1
Dairy Products								
Fluid milk and cream (milk equivalent)	310.1	152.7	271.4	340.1	348.6	375.1	401.1	421.1
Cheese	5.1	2.7	3.1	4.2	4.9	5.6	6.0	5.1
Butter	15.3	8.6	12.5	13.7	15.0	15.7	16.9	19.1
Ice cream	14.6	2.1	5.7	9.0	12.0	15.2	19.1	27.1
Evaporated and condensed milk :	20.7	16.0	24.4	24.1	23.4	21.1	16.9	17.1
Other fats & oils :	33.4	37.6	35.0	32.7	31.7	31.7	32.7	37.1
Vegetables								
Potatoes	144.6	100.8	135.9	150.3	148.1	146.4	147.3	151.1
Fresh tomatoes 2/	115.6	55.2	71.1	82.0	84.7	85.3	81.1	84.1
Fresh leafy, green and yellow 2/	57.6	27.5	38.2	45.5	50.1	52.1	49.1	51.1
Fresh other 2/	47.9	47.2	49.2	46.9	44.2	44.5	44.1	44.1
Canned tomatoes :	9.5	4.1	6.0	7.4	8.4	9.7	11.2	14.1
Canned leafy, green & yellow :	6.9	3.7	5.9	7.7	8.4	9.1	10.1	11.1
Canned, other	5.6	3.9	1.8	9.8	10.2	10.1	10.2	10.1
Dried beans	8.7	14.1	12.7	11.2	9.0	7.6	6.6	5.4
Fruits								
Fresh citrus	52.4	8.4	19.3	32.2	43.1	55.1	69.4	97.8
Fresh other	80.9	31.0	42.8	54.7	66.4	80.5	101.7	146.1
Canned	20.4	8.4	11.1	15.9	18.6	21.5	24.9	30.1
Dried	5.3	2.4	3.6	4.9	5.2	5.6	6.2	7.1

1/ Based on Consumption Pattern derived from 1935-36 Consumer Purchases Study adjusted to estimated 1943 price data. Excludes farm-to-retail market losses.
 2/ Based on urban population since farm production estimates are not available.

Table 15.- Estimated 1935-36 per capita consumption of major food categories by income level ^{1/}

Food category	Average : for total popu- lation	Per capita consumption, families and single individuals with incomes of						
		Under : \$500	\$500- 1,000	\$1,000- 1,500	\$1,500- 2,000	\$2,000- 3,000	\$3,000- 5,000	\$5,000 and over
	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.
Meats								
Beef	45.1	23.2	37.3	46.3	54.1	59.0	63.3	79.0
Pork	7.6	4.2	5.0	7.3	9.1	11.2	13.1	16.8
Lamb & mutton	6.7	1.1	2.8	5.0	7.9	11.8	17.1	35.4
Bacon and salt								
side	17.1	22.4	17.3	15.6	15.4	15.4	17.0	18.4
Other pork	24.4	14.0	19.9	26.6	27.9	30.8	33.5	35.2
Poultry	15.7	9.8	12.1	14.3	15.9	19.2	28.0	49.9
Other meat	12.5	6.9	12.2	14.3	14.7	14.3	11.3	9.8
Sea Food	13.3	12.3	12.3	12.7	13.8	14.3	16.0	20.1
Dairy Products								
Fluid milk and								
cream (milk								
equivalent)	338.8	203.2	310.4	360.4	362.7	383.7	418.0	512.8
Butter	16.6	10.6	15.5	16.9	18.4	19.3	20.8	23.3
Ice cream	8.8	1.9	5.2	8.3	11.1	14.1	17.0	25.1
Evaporated and								
condensed milk	14.8	10.5	16.0	16.2	16.1	14.7	11.0	11.1
Other fats & oils	28.6	31.8	29.8	27.9	26.7	26.3	26.7	30.8
Vegetables								
Potatoes	158.1	114.5	164.2	171.7	169.6	168.3	167.0	171.5
Fresh tomatoes	14.4	5.3	11.8	14.3	16.8	18.8	21.1	26.1
Fresh leafy,								
green & yellow ^{2/}	60.2	35.7	49.3	57.9	67.7	75.1	83.1	102.8
Fresh other ^{2/}	50.3	33.8	38.9	46.3	57.5	61.7	73.5	97.1
Canned tomatoes	10.9	6.0	8.8	10.9	12.5	14.3	16.0	21.7
Canned leafy,								
green & yellow	9.7	5.0	8.0	10.3	11.3	12.4	13.5	15.8
Canned, other	20.3	9.1	18.3	23.2	24.1	24.5	24.2	24.2
Dried beans	8.6	11.1	9.9	9.0	7.4	6.0	5.3	4.3
Fruits								
Fresh citrus	36.6	9.1	21.6	34.5	46.3	58.9	74.4	106.9
Fresh other	99.7	54.2	75.0	93.4	112.7	135.1	168.0	248.3
Canned	13.0	10.5	13.7	19.4	22.5	25.9	30.2	37.6
Dried	6.0	3.2	4.8	6.6	7.0	7.5	8.2	9.9

^{1/} Based on consumption patterns derived from 1935-36 Consumer Purchase Study adjusted to estimated disappearance data. Excludes farm-to-retail market losses.

^{2/} Based on urban population since farm production estimates are not available.

green, and yellow vegetables, and fresh fruits for this group was 17 and 23 percent, respectively, less than the average per capita. The corresponding percentages for 1943 are 31 and 43 percent. However, it must be remembered that in 1935-36 the number of people in this income group was 64 percent of the total population while in 1943 it is expected to be only about half this percentage.

THE PERCENTAGE OF THE TOTAL FOOD SUPPLY TAKEN BY LEND-LEASE,
MILITARY AND CIVILIAN

The amount of our total food supply that goes to our military forces and lend-lease is of great public interest and is frequently distorted by the enemy in its propaganda to the United States. In order to supply the proper authorities with information table 16 was prepared. This table shows the estimated percentage of the total supply of various foods that goes to our military forces, lend-lease, civilian, and other sources.

Although the percentage of the total food supply that goes to lend-lease and our military forces has increased in recent years, the total civilian supply has not decreased in the same proportion. This is due, of course, to the fact that our production of food has greatly increased in the past few years. This fact is brought out in the last column of the table which gives civilian per capita supply for the years 1941, 1942, and 1943 as a percentage of the 1935-39 average.

Table 16.- The percentage distribution of the total food supply and civilian per capita as a percentage of the average for 1935-39, by calendar years, 1941-43

Item and year	Total supply = 100					Civilian
	Regular					per capita as
	exports	Lend-	Carry-	Military	Civilian	percentage of
	and	lease	over			1935-39
	shipments					average
	Percent	Percent	Percent	Percent	Percent	Percent
<u>All meats:</u>						
1941	1.3	2.8	3.0	2.4	90.5	112.4
1942 .....	.4	11.3	3.2	7.7	77.4	108.6
1943 .....	.3	12.9	3.0	12.4	71.4	111.1
<u>Fish</u>						
1941	1.2	7.9	16.7	1.9	72.3	101.5
1942	2.4	11.7	12.8	5.4	67.7	79.7
1943 .....	.4	11.2	9.9	10.1	68.4	78.2
<u>Eggs 1/</u>						
1941 .....	.1	3.6	3.2	1.6	87.8	105.1
1942 .....	.1	12.8	4.4	3.8	75.3	105.3
1943 .....	.1	16.4	4.1	6.0	69.9	107.7
<u>Poultry</u>						
1941 .....	.1	2/	6.2	1.8	91.9	111.2
1942 .....	.1	.9	5.6	4.0	89.4	122.9
1943 .....	.1	1.2	5.2	7.3	86.2	127.6
<u>Total milk</u>						
1941 .....	.9	1.6	4.6	1.9	91.0	101.6
1942 .....	.5	4.4	4.1	3.7	87.3	104.4
1943 .....	.5	7.6	2.4	6.9	82.6	101.0
<u>Fats and</u>						
<u>Oils (in-</u>						
<u>cluding</u>						
<u>butter) 3/...</u>						
1941	3.2	3.2	3.4	1.6	88.6	106.6
1942	3.8	11.0	2.4	3.3	80.0	103.1
1943	4.6	15.2	2.0	5.8	72.4	103.5
<u>Fruits 4/</u>						
1941	2.8	1.6	.8	2.0	92.8	114.3
1942	2.5	1.3	.7	6.5	89.0	98.6
1943	2.5	1.6	.8	10.9	84.2	91.6
<u>Vegetables 5/:</u>						
1941 .....	.7	.7	15.8	2.1	75.1	99.2
1942 .....	.5	.8	15.8	5.0	72.5	101.0
1943 .....	.5	1.1	15.1	9.4	68.6	95.5
<u>Grains 6/</u>						
1941	2.3	.1	57.8	.4	28.5	100.5
1942	1.8	1.5	61.6	.6	24.1	99.9
1943	1.9	2.6	54.4	2.1	24.8	103.5
<u>Sugar</u>						
1941 .....	.6	--	33.4	.8	65.2	107.7
1942 .....	.5	2.5	38.4	2.1	56.5	83.6
1943 .....	.5	2.7	1/42.2	4.6	1/50.0	1/ 71.9

Continued -

Table 16.- The percentage distribution of the total food supply and civilian per capita as a percentage of the average for 1935-39, by calendar years, 1941-43 - Continued

- 1/ Excludes eggs used for hatching: 1941 - 3.7 percent; 1942 - 3.6 percent; 1943 - 3.5 percent.
- 2/ Negligible.
- 3/ Rough estimates for stocks for "Other food products and uses" were included in these estimates.
- 4/ Estimated on a crop year basis.
- 5/ Includes fresh, and processed vegetables, potatoes, sweetpotatoes and dry edible beans. The latter 3 exclude nonfood uses: 1941 - 5.6 percent; 1942 - 5.4 percent; 1943 - 5.3 percent.
- 6/ Wheat, rye and rice.
- 7/ Assuming one-half pound ration per capita.

